

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended): A method of constructing a multimedia database method, comprising:

(a) receiving a start point and an end point of each of a plurality of first semantic ~~unit~~ units of multimedia data, ~~which is the multimedia data being divided into a plurality of first semantic units such that each of the first semantic units can be presented to a user upon a keyword-based search as a smallest meaningful unit for searching for multimedia data;~~

(b) receiving a at least one keyword for each of the first semantic ~~unit~~ units;

(c) receiving a start point and an end point of ~~each~~ at least one second semantic unit of the multimedia data ~~including at least one first semantic unit, the second semantic unit including at least two first semantic units and being associated with keywords of first semantic units that are included in the second semantic unit such that the second semantic unit can be presented to a user upon the keyword-based search;~~ and

(d) storing a the keyword together with ~~location information~~ the start point and the end point of its corresponding first semantic unit and second semantic unit, wherein the user controls a granularity of the keyword-based search result with the same keyword by requesting one of the first semantic unit and the second semantic unit be presented.

2. (currently amended): The method of claim 1 further comprising (e) receiving a start point and an end point of each at least one third semantic unit, the third semantic unit including at least two second semantic units and being associated with keywords of second semantic units that are included in the third semantic unit such that the third semantic unit can be presented to the user upon the keyword-based search including a predetermined number of second semantic units, wherein in step (d), a keyword is stored with ~~location information~~ the start point and the end point of its corresponding third semantic unit, wherein the user further controls a granularity of the keyword-based search result with the same keyword by requesting one of the first semantic unit, the second semantic unit and the third semantic unit be presented.

3. (currently amended): The method of claim 1 further comprising (f) receiving titles of each of the first semantic unit units and each the second semantic unit, wherein in step (d), a the keyword is stored with the ~~titles~~ titles of its corresponding first semantic unit and second semantic unit.

4. (currently amended): The method of claim 1, wherein a the keyword is classified into one of predetermined categories and is stored together with its corresponding category in step (d).

5. (currently amended): The method of claim 1 or 4, wherein a the keyword is classified into a person category, an object category, a time category, or a place category.

6. (currently amended): The method of claim 1 further comprising (g) storing ~~a predetermined~~ the keyword together with its similar keywords so that a one of the first semantic unit and the second semantic unit associated with both the keyword and the similar keywords are presented to the user as a search result corresponding to the predetermined keyword and semantic units corresponding to its similar keywords can be searched for together when a search for the semantic unit corresponding to the predetermined keyword or any of its similar keywords is carried out.

7. (original): The method of claim 1, wherein the length of each first semantic unit and the length of each second semantic unit are determined by a user who constructs the multimedia database.

8. (currently amended): A multimedia database system ~~for constructing a multimedia database~~, comprising:

a multimedia database which stores multimedia data;

a keyword database which stores keywords associated with a plurality of first semantic units which are necessary for searching for the multimedia data, location information of each of the first semantic unit units of the multimedia data, which is a smallest unit for searching for multimedia data, and location information of each at least one second semantic unit of the multimedia data, which includes at least one first semantic unit, the multimedia data being divided into a plurality of first semantic units such that each of the first semantic units can be presented to a user upon a keyword-based search as a smallest unit for searching for multimedia data, and the second semantic unit including at least two first semantic units and being

associated with keywords of first semantic units that are included in the second semantic unit such that the second semantic unit can be presented to a user upon the keyword-based search;

an input unit which receives the location information of each first semantic unit[[,]] including a start point and an end point of each of the first semantic units, the location information of each second semantic unit[[,]] including a start point and an end point of the second semantic unit, and the keywords; and

~~a control unit which receives the location information of each first semantic unit, the location information of each second semantic unit, and the keywords from the input unit and stores the keywords in the keyword database together with their corresponding first and second semantic units' location information~~ for controlling the process for storing the keywords with the location information of the corresponding first semantic unit and second semantic unit and generating a search result with a different granularity of the search result with the same keyword depending on a user's input requesting one of the first semantic unit and the second semantic unit be presented.

9. (original): The system of claim 8, wherein the input unit receives titles of each first semantic unit and each second semantic unit, and the control unit stores the titles in the keyword database together with their corresponding keywords.

10. (original): The system of claim 8, wherein the input unit receives predetermined categories into which the keywords are classified, and the controller stores the keywords with their corresponding category.

11. (currently amended): The system of claim 8, wherein the keyword database includes a similar keyword database where keywords having similar meanings ~~or indicating the same thing~~ are stored, and when a keyword is input via the input unit, the controller searches the similar keyword database for a keyword that matches the input keyword, and, if there is a search result, stores the input keyword in the keyword database together with its similar keywords obtained from the similar keyword database so that not only a semantic unit corresponding to the input keyword but also semantic units corresponding to its similar keywords can be searched for when a search for the semantic unit of the input keyword or any of its similar keywords is carried out.

12. (currently amended): A method of constructing a multimedia database, comprising:

(a) setting a length of each of a plurality of first semantic unit units of multimedia data, ~~which is~~ the multimedia data being divided into a plurality of first semantic units such that each of the first semantic units can be presented to a user upon a keyword-based search as a smallest unit for searching for multimedia data according to a user's input;

(b) extracting a keyword from each first semantic unit ~~using a predetermined method;~~

(c) setting a length of each at least one second semantic unit of the multimedia data ~~including at least one first semantic unit according to the users input~~ , the second semantic unit including at least two first semantic units and being associated with keywords of first semantic units that are included in the

second semantic unit such that the second semantic unit can be presented to a user upon the keyword-based search; and

(d) storing the extracted keyword with its corresponding first semantic unit and second semantic unit, wherein the user controls a granularity of the keyword-based search result with the same keyword by requesting one of the first semantic unit and the second semantic unit be presented.

13. (currently amended): The method of claim 12, wherein (b) comprises:

(b1) extracting voice data from the multimedia data using a ~~predetermined~~ speech recognition technique; and

(b2) extracting a predetermined part ~~of speech~~ from the extracted voice data as a keyword.

14. (original): The method of claim 12, wherein (b) further comprises:

(b3) receiving a first keyword and first keyword information; and

(b4) extracting the first keyword as a keyword of a first semantic unit when the first semantic unit has the same keyword information as the received keyword information.

15. (original): The method of claim 14, wherein the keyword information is voice, an image, or text.

16. (currently amended): A multimedia database system ~~for constructing a multimedia database~~, comprising:

a multimedia database which stores multimedia data;

a keyword database which stores keywords associated with a plurality of first semantic units which are necessary for searching for the multimedia data, location information of each of the first semantic unit units of the multimedia data, which is a smallest unit for searching for multimedia data, and location information of each at least one second semantic unit of the multimedia data, which includes at least one first semantic unit the multimedia data being divided into a plurality of first semantic units such that each of the first semantic units can be presented to a user upon a keyword-based search as a smallest unit for searching for multimedia data, and the second semantic unit including at least two first semantic units and being associated with keywords of first semantic units that are included in the second semantic unit such that the second semantic unit can be presented to a user upon the keyword-based search;

a keyword extraction unit which extracts keywords from each first semantic unit the multimedia data using a predetermined method; and

a control unit ~~which divides the multimedia data into first semantic units and second semantic units and stores keywords in the keyword database together with their corresponding first and second semantic units' location information for controlling the process for storing the keywords with the location information of the corresponding first semantic unit and second semantic unit and generating a search result with a different granularity of the search result with the same keyword depending on a user's input requesting one of the first semantic unit and the second semantic unit be presented.~~

17. (currently amended): The system of claim 14 ~~16~~ further comprising an input unit which receives the location information of each first semantic unit,

including a start point and an end point, the location information of each second semantic unit, including a start point and an end point, and the keywords.

18. (currently amended): The system of claim 16, wherein the keyword extraction unit comprises:

a voice extractor which extracts voice data from the multimedia data using a ~~predetermined~~ speech recognition technique; and

a part-of-speech extractor which extracts a predetermined part of speech from the voice data extracted by the voice extractor as a keyword.

19. (original): The system of claim 16 further comprising an input unit which receives a first keyword and first keyword information, wherein the keyword extraction unit extracts the first keyword as a keyword of a first semantic unit when the first semantic unit has the same keyword information as the received keyword information.

20. (currently amended): A method of providing a multimedia data search service using a system for providing a multimedia data search service, the system including a multimedia database which stores multimedia data, and a keyword database which stores keywords associated with a plurality of first semantic units which are necessary for searching for the multimedia data, location information of each first semantic unit of the multimedia data, ~~which is a smallest unit for searching for multimedia data~~, and location information of each second semantic unit of the multimedia data, ~~including at least one first semantic unit~~ the multimedia data being divided into a plurality of first semantic units such that each of the first semantic units can be presented to a user upon a keyword-based search

as a smallest unit for searching for multimedia data, and the second semantic unit including at least two first semantic units and being associated with keywords of first semantic units that are included in the second semantic unit such that the second semantic unit can be presented to a user upon the keyword-based search, the method comprising:

- (a) receiving ~~keywords~~ a keyword necessary to search for multimedia data;
- (b) allowing a user to select a search unit level from ~~between~~ a first semantic unit and a second semantic unit;
- (c) searching for multimedia data ~~of~~ with the keyword in a granularity of the received search unit level selected by the user whose keywords match the received keyword; and
- (d) outputting a search result to a user ~~information of a searched semantic unit of the received search unit level, linking with the search semantic unit in the multimedia database , wherein the user controls a granularity of the keyword-based search result with the same keyword by selecting one of the first semantic unit and the second semantic unit be presented.~~

21. (original): The method of claim 20, wherein keywords are stored in the keyword database together with their corresponding first and second semantic units' location information and titles, and in (d), titles of searched semantic units are displayed on a screen.

22. (original): The method of claim 20, wherein in (d), the searched semantic units are displayed on a screen together with their respective keywords.

23. (currently amended): A system for providing a multimedia data search service, comprising:

a multimedia database which stores multimedia data;

a keyword database which stores keywords associated with a plurality of first semantic units which are necessary for searching for the multimedia data, location information of each first semantic unit of the multimedia data, which is a smallest unit for searching for multimedia data, and location information of each second semantic unit of the multimedia data, which includes at least one first semantic unit the multimedia data being divided into a plurality of first semantic units such that each of the first semantic units can be presented to a user upon a keyword-based search as a smallest unit for searching for multimedia data, and the second semantic unit including at least two first semantic units and being associated with keywords of first semantic units that are included in the second semantic unit such that the second semantic unit can be presented to a user upon the keyword-based search;

an input unit which receives a keyword and a search unit level from a user;

a control unit which searches the keyword database ~~for a~~ with the keyword received from the user that matches the received keyword, provides links between resulting search results and places in the multimedia database where the search results are stored, and outputs ~~some of the search results selected by the user~~ generated with a different granularity of the search result depending on a user's input requesting one of the first semantic unit and the second semantic unit be presented; and

a display unit which displays the ~~searched~~ search results obtained by the control unit.

Applicant: Chung Tae Kim
Application No.: 10/506,600

24-33. (cancelled)

34. (currently amended): A computer-readable recording medium on which a program enabling the method of any of claims 1 through 4, 6, 7, 12 through 15, and 20 through 22, ~~24, 26, 28, and 30 through 32~~ is recorded.